

AAAAI Ask The Expert

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SC IG Infusion Pumps

The simple and most direct answer for inpatient administration of subcutaneous IgG (Hizentra 20%, Gammagard 10% Liquid or Gamunex-C [10%]) is to use the standard intravenous infusion pumps used on the inpatient units. We have used IV pumps for subcutaneous IgG (IGSC) infusions, including 20% products, for at least ten years without problems. For inpatient use, I don't see a reason to purchase a different pump.

Because most IGSC infusions are done in the home setting, I offer a few additional comments. There are a variety of pumps used for IGSC infusions ranging from wind up mechanical pumps to battery operated pumps specifically designed for subcutaneous infusion. I can only comment on the pumps we have used clinically or during IGSC clinical trials.

Disclosure: I have no commercial interest in any infusion pump.

Freedom Pump

Positives

Inexpensive, easy to use, light weight, winds up like a toy (mechanical)

Negatives

No alarms, whistle or bells to signal pump failure or occlusion Operates at a single rate. Rates can be changed by changing the diameter of the tubing. If the patient ramps up their rate, different tubing will be needed for each change.

Uses a 60ml syringe only. If a large volume is infused, multiple syringes will be needed.
Connecting the syringe to the pump can be difficult for the elderly or someone with joint disease.

Cadd Prizm pump VIP Model 6101

Wt 1.0 lbs

Positives

Very easy for the patient to use.

Infusate is contained in an IV bag with essentially unlimited capacity.

Alarms for occlusion, too much back pressure, low volume and the end of the infusion.

Has a lock out system so patients can't change their rate independently.

Negatives

Patients and nurses have complained of hand pain when preparing for the infusion. (Spiking of the IV bag and priming).

Priming is difficult and not intuitive.

The pump cassette is difficult to lock in place.

The pump may signal the end of the infusion when there is drug left in the IV bag (up to 100ml in our experience).

The pump cannot be pre-set to change rates during the infusion.

BodyGuard 323

0.8lbs

Positives

Very easy for the patient to use, easy on the hands, light weight.

Infusate is contained in an IV bag with essentially unlimited capacity.

Alarms for occlusion, too much back pressure, low volume and the end of the infusion.

Has a lock out system so patients can't change their rate independently.
Has it's own charger.
Accommodates programmed rate changes.

Negative

The pump may signal the end of the infusion when there is a small amount of drug left in the IV bag.

Curlin Medical 4000 CMS

Wt 1.4lbs

Positives

Very easy for the patient to use, easy on the hands.

Infusate is contained in an IV bag with essentially unlimited capacity.

Alarms for occlusion, too much back pressure, low volume and the end of the infusion.

Has a lock out system so patients can't change their rate independently.

Has it's own charger.

Accommodates programmed rate changes.

Negatives

The pump may signal the end of the infusion when there is a small amount of drug left in the IV bag.

Somewhat heavy for an ambulatory pump.

I hope these comments are helpful.

Richard L. Wasserman, MD, PhD

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